

Fastening of a Riding ring to the Casing of a Rotary Cylinder

CLAIMS

1. Fastening of a riding ring (10) on the casing (11) of a rotary cylinder, in particular a rotary furnace for the heat treatment of free-flowing materials, in particular bulk solids such as raw cement mix, whereby the riding ring (10), which encircles the rotary-cylinder casing (11) with clearance (12), is locked in the axial direction and in the circumferential direction relative to the rotary cylinder (11) via support elements (13, 14) affixed to the casing of the rotary cylinder, characterized in that distributed clamping elements (15, 16) are arranged around the perimeter of the riding ring (10) only manufactured as a turning work piece, which on one hand engage in a force-fit manner with circular grooves of the riding ring and which on the other hand are connected with support elements (13, 14) affixed to the casing of the rotary cylinder (11) and which immobilize the riding ring in both the axial and circumferential directions.

2. Riding ring fastening in accordance with claim 1, characterized in that the circular grooves of the riding ring (10) are arranged on the interior surface of the riding ring and/or on at least one lateral surface of the riding ring as annular tensioning grooves (19, 20, 20a through 20d), into which the screw jaws (21, 25, 27) of the clamping elements (15, 16) engage, which are affixed between the support elements (13, 14) and each of which have a clamping screw (23), after the pulling of which the screw jaw of the clamping element is tensioned in a force-fit manner on the riding ring (10).

3. Riding ring fastening in accordance with claim 2, characterized in that the screw jaws (21) of the clamping elements are designed angularly, with an axial angular arm, the hook-shaped end (22 or 22a, 22b) of which engages with the circular groove (19) arranged on the interior surface of the riding ring, while the radial angular arm supports the at least one clamping screw (23), which engages with the circular groove (20) arranged on the neighboring lateral surface of the riding ring and thus tensions the screw jaw (21) with the riding ring (10) in a force-fitting manner.

4. Riding ring fastening in accordance with claim 3, characterized in that the tensioning between the clamping element designed like screw jaw (21) and the riding ring (10) is designed as a symmetrical 3-point transfer of force with two spaced hooks (22a, 22b) per angular screw jaw (21) arranged on the axial angular arm, which lie symmetrically opposite the clamping screw (23) arranged in the radial angular arm of the screw jaw.
5. Riding ring fastening in accordance with claim 2, characterized in that the screw jaws of the clamping elements are designed like grippers, the gripping jaws (25a, 25b) of which engage in two concentric circular grooves (20a, 20b) of the lateral surface of the riding ring.
6. Riding ring fastening in accordance with claim 2, characterized in that the screw jaws of the clamping elements are designed like shears, the shear ends (27a, 27b) of which can be spread by opening or spreading apart the lateral surfaces of the riding ring into an appropriately shaped radial groove (20c).
7. Riding ring fastening in accordance with claim 1, characterized in that the support elements (13, 14) affixed to the rotary-cylinder casing (11) have spring guides (28, 29) lying axial to the rotary cylinder, between each of which is arranged a clamping element (15) tensioned in a force-fit manner on the bearing ring (10).